

### **ABSTRACT OF THE DISCLOSURE**

A system and method for discriminating tissue types, controlling the level of therapy to tissue, and determining the health of a known tissue by measuring the characteristics of an electrical signal applied to a conductive element located within or by the tissue. Additionally, the system and method may be used for determining whether the conductive tip of a pedicle probe or pedicle screw is located in one of cortical bone, cancellous bone, and cortical bone near a boundary with soft tissue, whether the conductive tip of a cannula is located adjacent to one of nerve tissue and annulus tissue, and whether the conductive tip of a cathode is located adjacent to one of nerve tissue and prostate gland tissue.